

D ; FLORENCE, K A

PRIORITY-DATA: 1998US-113006P (December 18, 1998), 1998US-112809P (December 17, 1998), 2000US-0591316 (June 9, 2000), 2001US-0895298 (July 2, 2001)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>US 20030078405 A1</u>	April 24, 2003		000	C07H021/04
<u>WO 200035937 A1</u>	June 22, 2000	E	559	C07H021/04
<u>AU 200031240 A</u>	July 3, 2000		000	
<u>EP 1140970 A1</u>	October 10, 2001	E	000	C07H021/04
<u>JP 2002532083 W</u>	October 2, 2002		570	C12N015/09

INT-CL (IPC): A61 K 31/711; A61 K 38/00; A61 K 48/00; A61 P 1/00; A61 P 1/04; A61 P 3/02; A61 P 25/00; A61 P 25/14; A61 P 25/16; A61 P 25/18; A61 P 25/28; A61 P 29/00; A61 P 35/00; A61 P 37/00; A61 P 43/00; C07 H 21/04; C07 K 14/435; C07 K 14/47; C07 K 16/18; C12 N 1/15; C12 N 1/19; C12 N 1/21; C12 N 5/06; C12 N 5/10; C12 N 15/09; C12 N 15/12; C12 N 15/64; C12 P 21/02; C12 Q 1/02; G01 N 33/15; G01 N 33/50

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Detailed Description](#) | [Claims](#) | [KWMC](#) | [Drawn D](#)

 3. Document ID: US 5849564 A

L5: Entry 3 of 8

File: DWPI

Dec 15, 1998

DERWENT-ACC-NO: 1999-069741

DERWENT-WEEK: 199906

COPYRIGHT 2004 DERWENT INFORMATION LTD

TITLE: Kaposi's sarcoma-associated herpes virus nucleic acid - encodes di:hydro:folate reductase and is useful for treatment, prophylaxis or diagnosis of Kaposi's sarcoma

INVENTOR: BOHENZKY, R A; CHANG, Y ; EDELMAN, I S ; MOORE, P S ; RUSSO, J J

PRIORITY-DATA: 1996US-0770379 (November 29, 1996)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>US 5849564 A</u>	December 15, 1998		109	C07H021/04

INT-CL (IPC): C07 H 21/04; C12 N 1/20; C12 N 15/63

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Detailed Description](#) | [Claims](#) | [KWMC](#) | [Drawn D](#)

 4. Document ID: US 6605425 B1, WO 9811132 A1, EP 932621 A1

L5: Entry 4 of 8

File: DWPI

Aug 12, 2003

DERWENT-ACC-NO: 1998-207326

DERWENT-WEEK: 200355

COPYRIGHT 2004 DERWENT INFORMATION LTD

TITLE: Immunogenic determinant for use in diagnosis of Kaposi's sarcoma - consists of or contains sequence of carboxy terminal end of Kaposi's sarcoma-related herpes virus open reading frame 65

INVENTOR: CHANG, Y; MOORE, P S; SCHULZ, T F; SIMPSON, G R

PRIORITY-DATA: 1996GB-0018890 (September 10, 1996)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
US 6605425 B1	August 12, 2003		000	C12Q001/70
WO 9811132 A1	March 19, 1998	E	025	C07K014/03
EP 932621 A1	August 4, 1999	E	000	C07K014/03

INT-CL (IPC): A61 K 39/245; C07 K 7/00; C07 K 14/03; C12 Q 1/70; G01 N 33/53

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Claims](#) | [KMC](#) | [Drawn D](#)

5. Document ID: WO 9804576 A1, AU 9740478 A, US 5831064 A, US 5853734 A, US 5854398 A, US 5854418 A, US 5859225 A, US 5861500 A, US 5863787 A, EP 934333 A1, US 5948676 A, US 6348586 B1, JP 2002513274 W

L5: Entry 5 of 8

File: DWPI

Feb 5, 1998

DERWENT-ACC-NO: 1998-130615

DERWENT-WEEK: 200305

COPYRIGHT 2004 DERWENT INFORMATION LTD

TITLE: New nucleic acid encoding Kaposi's sarcoma associated herpes virus proteins - useful for, e.g. detecting levels of HHV8 in, and preparation of vaccines for treatment of, HIV patients

INVENTOR: BOHENZKY, R A; CHANG, Y; EDELMAN, I S; MOORE, P S; RUSSO, J J

PRIORITY-DATA: 1996US-0757669 (November 29, 1996), 1996US-0686243 (July 25, 1996), 1996US-0686349 (July 25, 1996), 1996US-0686350 (July 25, 1996), 1996US-0687253 (July 25, 1996), 1996US-0708678 (September 5, 1996), 1996US-0728323 (October 10, 1996), 1996US-0747887 (November 13, 1996), 1996US-0748640 (November 13, 1996), 1996US-0729615 (July 25, 1996), 1999US-0230371 (November 17, 1999)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
WO 9804576 A1	February 5, 1998	E	230	C07H021/04
AU 9740478 A	February 20, 1998		000	C07H021/04
US 5831064 A	November 3, 1998		000	C07H021/04
US 5853734 A	December 29, 1998		000	A61K034/12
US 5854398 A	December 29, 1998		000	C07K016/08
US 5854418 A	December 29, 1998		000	A61K039/245
US 5859225 A	January 12, 1999		000	C07H021/04
US 5861500 A	January 19, 1999		000	A61K039/245
US 5863787 A	January 26, 1999		000	C07H021/04
EP 934333 A1	August 11, 1999	E	000	C07H021/04

<u>US 5948676 A</u>	September 7, 1999	000	C12N015/00
<u>US 6348586 B1</u>	February 19, 2002	000	A61K039/245
<u>JP 2002513274 W</u>	May 8, 2002	202	C12N015/09

INT-CL (IPC): A01 K 67/027; A61 K 34/12; A61 K 39/245; A61 K 39/395; A61 P 31/22;
A61 P 35/00; C07 H 21/04; C07 K 14/03 ; C07 K 16/08; C07 K 19/00; C12 N 1/15; C12 N
1/19; C12 N 1/21; C12 N 7/00; C12 N 7/02; C12 N 15/00; C12 N 15/09; C12 N 15/10;
C12 N 15/38; C12 P 19/34; C12 P 21/08; C12 Q 1/68; G01 N 33/50; G01 N 33/569; C12 N
15/09; C12 R 1:93

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Image](#) | [Text](#) | [Claims](#) | [KWMC](#) | [Drawn D](#)

6. Document ID: WO 9727208 A1, AU 9717571 A, EP 891374 A1, JP 2000503213 W,
 MX 9805961 A1, US 6183751 B1, AU 731302 B

L5: Entry 6 of 8

File: DWPI

Jul 31, 1997

DERWENT-ACC-NO: 1997-393610

DERWENT-WEEK: 200305

COPYRIGHT 2004 DERWENT INFORMATION LTD

TITLE: Isolated nucleic acid encoding polypeptide of herpes virus associated with
Kaposi sarcoma - useful for treatment, prevention and diagnosis of Kaposi sarcoma

INVENTOR: BOHENZKY, R A; CHANG, Y ; EDELMAN, I S ; MOORE, P S ; RUSSO, J J

PRIORITY-DATA: 1996US-0757669 (November 29, 1996), 1996US-0592963 (January 29, 1996), 1994US-0292365 (August 18, 1994), 1994US-0343101 (November 21, 1994), 1995US-0420235 (April 11, 1995), 1995WO-US10194 (August 11, 1995), 1995WO-US15138 (November 21, 1995)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>WO 9727208 A1</u>	July 31, 1997	E	226	C07H021/04
<u>AU 9717571 A</u>	August 20, 1997		000	C07H021/04
<u>EP 891374 A1</u>	January 20, 1999	E	000	C07H021/04
<u>JP 2000503213 W</u>	March 21, 2000		200	C12N015/09
<u>MX 9805961 A1</u>	June 1, 1999		000	C07H021/04
<u>US 6183751 B1</u>	February 6, 2001		000	A61K039/12
<u>AU 731302 B</u>	March 29, 2001		000	C07H021/04

INT-CL (IPC): A01 K 67/027; A61 K 31/7088; A61 K 39/00; A61 K 39/12; A61 K 39/245;
A61 K 39/395; A61 K 45/00; A61 K 48/00; A61 P 31/22; A61 P 35/00; C07 H 21/04; C07
K 16/40; C12 N 1/21; C12 N 5/00; C12 N 5/10; C12 N 9/12; C12 N 9/16; C12 N 9/24;
C12 N 9/88; C12 N 15/02; C12 N 15/09; C12 P 1/00; C12 P 21/02; C12 P 21/08; C12 Q
1/68; C12 Q 1/70; G01 N 33/53; G01 N 33/566; G01 N 33/569; C12 N 15/09; C12 R 1:92

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Image](#) | [Text](#) | [Claims](#) | [KWMC](#) | [Drawn D](#)

7. Document ID: WO 9615779 A1, AU 9643670 A

L5: Entry 7 of 8

File: DWPI

May 30, 1996

DERWENT-ACC-NO: 1996-268320

DERWENT-WEEK: 200305

COPYRIGHT 2004 DERWENT INFORMATION LTD

TITLE: Herpes virus associated with Kaposi's sarcoma - also definitive DNA sequences, useful for diagnosis of and to develop prods. for treatment of Kaposi's sarcoma

INVENTOR: CHANG, Y; MOORE, P S

PRIORITY-DATA: 1995US-0420235 (April 11, 1995), 1994US-0343101 (November 21, 1994)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>WO 9615779 A1</u>	May 30, 1996	E	277	A61K031/00
<u>AU 9643670 A</u>	June 17, 1996		000	A61K031/00

INT-CL (IPC): A61 K 31/00; A61 K 35/00

Full | Title | Citation | Front | Review | Classification | Date | Reference | Drawings | Abstract | Claims | KWMC | Drawn D

8. Document ID: WO 9606159 A1, AU 9533210 A, EP 804547 A1, US 5801042 A, JP 10508461 W, US 5830759 A, AU 700913 B, US 6093550 A, US 6150093 A, US 6500663 B1

L5: Entry 8 of 8

File: DWPI

Feb 29, 1996

DERWENT-ACC-NO: 1996-151362

DERWENT-WEEK: 200305

COPYRIGHT 2004 DERWENT INFORMATION LTD

TITLE: Herpes:virus DNA associated with Kaposi's sarcoma - also associated vectors and proteins, used in detection and vaccination.

INVENTOR: CHANG, Y; MOORE, P S

PRIORITY-DATA: 1995US-0420235 (April 11, 1995), 1994US-0292365 (August 18, 1994), 1994US-0343101 (November 21, 1994), 1998US-0183688 (October 30, 1998), 1997US-0793624 (February 18, 1997), 2000US-0519489 (March 6, 2000)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>WO 9606159 A1</u>	February 29, 1996	E	305	C12N001/21
<u>AU 9533210 A</u>	March 14, 1996		000	C12N001/21
<u>EP 804547 A1</u>	November 5, 1997	E	000	C12N001/21
<u>US 5801042 A</u>	September 1, 1998		000	C12N001/21
<u>JP 10508461 W</u>	August 25, 1998		270	C12N015/09
<u>US 5830759 A</u>	November 3, 1998		000	C07H021/00
<u>AU 700913 B</u>	January 14, 1999		000	C12N001/21
<u>US 6093550 A</u>	July 25, 2000		000	G01N033/53
<u>US 6150093 A</u>	November 21, 2000		000	C12Q001/68
<u>US 6500663 B1</u>	December 31, 2002		000	C12N007/00

INT-CL (IPC): A01 K 67/027; A61 K 39/245; A61 K 39/395; A61 K 48/00; C07 H 21/00;



National
Library
of Medicine

Entrez	PubMed	Nucleotide	Protein	Genome	Structure	OMIM	PMC	Journals	Bo	
Search <input type="text" value="PubMed"/> for <input type="text"/>					<input type="button" value="Go"/>	<input type="button" value="Clear"/>				
<input type="button" value="Limits"/>		<input type="button" value="Preview/Index"/>			<input type="button" value="History"/>		<input type="button" value="Clipboard"/>		<input type="button" value="Details"/>	

About Entrez

Show: Sort Send to

Text Version

Items 1-20 of 116

of 6 Next

Entrez PubMed

Overview

Help | FAQ

Tutorial

New/Noteworthy

E-Utilities

PubMed Services

Journals Database

MeSH Database

Single Citation Matcher

Batch Citation Matcher

Clinical Queries

LinkOut

Cubby

Related Resources

Order Documents

NLM Gateway

TOXNET

Consumer Health

Clinical Alerts

ClinicalTrials.gov

PubMed Central

Privacy Policy

1: [Olsen SJ, Sarid R, Chang Y, Moore PS.](#)

Evaluation of the latency-associated nuclear antigen (ORF73) of Kaposi's sarcoma-associated herpesvirus by peptide mapping and bacterially expressed recombinant western blot assay.
J Infect Dis. 2000 Jul;182(1):306-10. Epub 2000 Jun 30.
PMID: 10882613 [PubMed - indexed for MEDLINE]

2: [Rainbow L, Platt GM, Simpson GR, Sarid R, Gao SJ, Stoiber H, Herrington CS, Moore PS, Schulz TF.](#)

The 222- to 234-kilodalton latent nuclear protein (LNA) of Kaposi's sarcoma-associated herpesvirus (human herpesvirus 8) is encoded by orf73 and is a component of the latency-associated nuclear antigen.
J Virol. 1997 Aug;71(8):5915-21.
PMID: 9223481 [PubMed - indexed for MEDLINE]

3: [Katano H, Sato Y, Kurata T, Mori S, Sata T.](#)

High expression of HHV-8-encoded ORF73 protein in spindle-shaped cells of Kaposi's sarcoma.
Am J Pathol. 1999 Jul;155(1):47-52.
PMID: 10393835 [PubMed - indexed for MEDLINE]

4: [Kedes DH, Lagunoff M, Renne R, Ganem D.](#)

Identification of the gene encoding the major latency-associated nuclear antigen of the Kaposi's sarcoma-associated herpesvirus.
J Clin Invest. 1997 Nov 15;100(10):2606-10.
PMID: 9366576 [PubMed - indexed for MEDLINE]

5: [Gao SJ, Zhang YJ, Deng JH, Rabkin CS, Flore O, Jenson HB.](#)

Molecular polymorphism of Kaposi's sarcoma-associated herpesvirus (Human herpesvirus 8) latent nuclear antigen: evidence for a large repertoire of viral genotypes and dual infection with different viral genotypes.
J Infect Dis. 1999 Nov;180(5):1466-76. Erratum in: J Infect Dis 1999 Nov;180(5):1756.
PMID: 10515805 [PubMed - indexed for MEDLINE]

6: [Komatsu T, Barbera AJ, Ballestas ME, Kaye KM.](#)

The Kaposi's sarcoma-associated herpesvirus latency-associated nuclear antigen.
Viral Immunol. 2001;14(4):311-7. Review.
PMID: 11792061 [PubMed - indexed for MEDLINE]

7: [Preiser W, Szep NI, Lang D, Doerr HW, Rabenau HF.](#)

 **Kaposi's sarcoma-associated herpesvirus seroprevalence in selected german patients: evaluation by different test systems.**
Med Microbiol Immunol (Berl). 2001 Dec;190(3):121-7.
PMID: 11827200 [PubMed - indexed for MEDLINE]

8: Calabro ML, Sheldon J, Favero A, Simpson GR, Fiore JR, Gomes E, Angarano G, Chieco-Bianchi L, Schulz TF. Related Articles, Links

 **Seroprevalence of Kaposi's sarcoma-associated herpesvirus/human herpesvirus 8 in several regions of Italy.**
J Hum Virol. 1998 Mar-Apr;1(3):207-13.
PMID: 10195244 [PubMed - indexed for MEDLINE]

9: Kellam P, Boshoff C, Whitby D, Matthews S, Weiss RA, Talbot SJ. Related Articles, Links

 **Identification of a major latent nuclear antigen, LNA-1, in the human herpesvirus 8 genome.**
J Hum Virol. 1997 Nov-Dec;1(1):19-29.
PMID: 10195227 [PubMed - indexed for MEDLINE]

10: Kellam P, Bourboulia D, Dupin N, Shotton C, Fisher C, Talbot S, Boshoff C, Weiss RA. Related Articles, Links

 **Characterization of monoclonal antibodies raised against the latent nuclear antigen of human herpesvirus 8.**
J Virol. 1999 Jun;73(6):5149-55.
PMID: 10233979 [PubMed - indexed for MEDLINE]

11: Grulich AE, Olsen SJ, Luo K, Hendry O, Cunningham P, Cooper DA, Gao SJ, Chang Y, Moore PS, Kaldor JM. Related Articles, Links

 **Kaposi's sarcoma-associated herpesvirus: a sexually transmissible infection?**
J Acquir Immune Defic Syndr Hum Retrovirol. 1999 Apr 1;20(4):387-93.
PMID: 10096584 [PubMed - indexed for MEDLINE]

12: Zhu L, Wang R, Sweat A, Goldstein E, Horvat R, Chandran B. Related Articles, Links

 **Comparison of human sera reactivities in immunoblots with recombinant human herpesvirus (HHV)-8 proteins associated with the latent (ORF73) and lytic (ORFs 65, K8.1A, and K8.1B) replicative cycles and in immunofluorescence assays with HHV-8-infected BCBL-1 cells.**
Virology. 1999 Apr 10;256(2):381-92.
PMID: 10191203 [PubMed - indexed for MEDLINE]

13: Dittmer DP. Related Articles, Links

 **Transcription profile of Kaposi's sarcoma-associated herpesvirus in primary Kaposi's sarcoma lesions as determined by real-time PCR arrays.**
Cancer Res. 2003 May 1;63(9):2010-5.
PMID: 12727810 [PubMed - indexed for MEDLINE]

14: Katano H, Iwasaki T, Baba N, Terai M, Mori S, Iwamoto A, Kurata T, Sata T. Related Articles, Links

 **Identification of antigenic proteins encoded by human herpesvirus 8 and seroprevalence in the general population and among patients with and without Kaposi's sarcoma.**
J Virol. 2000 Apr;74(8):3478-85.
PMID: 10729121 [PubMed - indexed for MEDLINE]

15: Wang YF, Lee SB, Cheng LC, Tai MH, Su IJ. Related Articles, Links

 Detection of serum antibodies to three different recombinant antigens of human herpesvirus 8 by immunoblotting: seroprevalence studies in Taiwan.
Clin Chim Acta. 2002 Jun;320(1-2):37-42.
PMID: 12083198 [PubMed - indexed for MEDLINE]

16: [Juhasz A, Konya J, Beck Z, Remenyik E, Veress G, Begany A, Medgyessy I, Hunyadi J, Gergely L.](#) Related Articles, Links
 HHV-8 ELISA based on a one-step affinity capture of biotinylated K8.1 antigen.
J Virol Methods. 2001 May;94(1-2):163-72.
PMID: 11337051 [PubMed - indexed for MEDLINE]

17: [Katano H, Sato Y, Sata T.](#) Related Articles, Links
 Expression of p53 and human herpesvirus-8 (HHV-8)-encoded latency-associated nuclear antigen with inhibition of apoptosis in HHV-8-associated malignancies.
Cancer. 2001 Dec 15;92(12):3076-84.
PMID: 11753987 [PubMed - indexed for MEDLINE]

18: [Zhang YJ, Deng JH, Rabkin C, Gao SJ.](#) Related Articles, Links
 Hot-spot variations of Kaposi's sarcoma-associated herpesvirus latent nuclear antigen and application in genotyping by PCR-RFLP.
J Gen Virol. 2000 Aug;81(Pt 8):2049-58.
PMID: 10900044 [PubMed - indexed for MEDLINE]

19: [Wilkinson D, Sheldon J, Gilks CF, Schulz TF.](#) Related Articles, Links
 Prevalence of infection with human herpesvirus 8/Kaposi's sarcoma herpesvirus in rural South Africa.
S Afr Med J. 1999 May;89(5):554-7.
PMID: 10416461 [PubMed - indexed for MEDLINE]

20: [Simpson GR, Schulz TF, Whitby D, Cook PM, Boshoff C, Rainbow L, Howard MR, Gao SJ, Bohenzky RA, Simmonds P, Lee C, de Ruiter A, Hatzakis A, Tedder RS, Weller IV, Weiss RA, Moore PS.](#) Related Articles, Links
 Prevalence of Kaposi's sarcoma associated herpesvirus infection measured by antibodies to recombinant capsid protein and latent immunofluorescence antigen.
Lancet. 1996 Oct 26;348(9035):1133-8.
PMID: 8888167 [PubMed - indexed for MEDLINE]

Display	Summary	Show: 20	Sort	Send to	Text
Items 1-20 of 116			Page	1	of 6 Next

[Write to the Help Desk](#)

[NCBI](#) | [NLM](#) | [NIH](#)

[Department of Health & Human Services](#)

[Freedom of Information Act](#) | [Disclaimer](#)

d 13 23 all

L3 ANSWER 23 OF 24 MEDLINE on STN
AN 97366651 MEDLINE
DN PubMed ID: 9223481
TI The 222- to 234-kilodalton latent nuclear protein (LNA) of **Kaposi**'s sarcoma-associated herpesvirus (human herpesvirus 8) is encoded by orf73 and is a component of the latency-associated nuclear antigen.
AU Rainbow L; Platt G M; Simpson G R; Sarid R; Gao S J; Stoiber H; Herrington C S; Moore P S; Schulz T F
CS Department of Medical Microbiology and Genitourinary Medicine, The University of Liverpool, United Kingdom.
NC U64CCU210852
SO Journal of virology, (1997 Aug) 71 (8) 5915-21.
Journal code: 0113724. ISSN: 0022-538X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; AIDS
EM 199707
ED Entered STN: 19970812
Last Updated on STN: 19980206
Entered Medline: 19970731
AB **Kaposi's** sarcoma (KS)-associated herpesvirus or human herpesvirus 8 (KSHV/HHV8) is the likely cause of KS and primary effusion lymphomas or body cavity-based lymphomas (BCBLs). A latency-associated nuclear immunofluorescence antigen (**LNA**) (D. H. Kedes, E. Operksalski, M. Busch, R. Kohn, J. Flood, and D. Ganem, Nat. Med. 2:918-924, 1996; S. J. Gao, L. Kingsley, M. Li, W. Zheng, C. Parravicini, J. Ziegler, R. Newton, C. R. Rinaldo, A. Saah, J. Phair, R. Detels, Y. Chang, and P. S. Moore, Nat. Med. 2:925-928, 1996) and a 222- to 234-kDa nuclear protein (**LNA**) (S. J. Gao, L. Kingsley, D. R. Hoover, T. J. Spira, C. R. Rinaldo, A. Saah, J. Phair, R. Detels, P. Parry, Y. Chang, and P. S. Moore, N. Engl. J. Med. 335:233-241, 1996) have previously been described in BCBL cell lines by immunofluorescence and Western blotting techniques, respectively. To identify the viral gene(s) encoding this antigen(s) we screened a cDNA library from HBL-6 cells, a B-cell lymphoma cell line persistently infected with KSHV/HHV8, with KS patient sera. One set of positive clones contained the 3' end of orf73, as well as the complete orf72 and orfK13, and another set contained the 5' end of orf73. Comparison of cDNA sequences with the KSHV/HHV8 genomic sequence revealed a splice event, occurring upstream of orf73. Immunoaffinity purified **antibodies** to a recombinant carboxy-terminal fragment of the orf73-encoded protein showed the characteristic speckled nuclear immunofluorescence pattern of **LNA** and reacted with the 222- to 234-kDa LNA on Western blots. Expression of full-length orf73 in bacteria and COS7 cells reproduced the LNA banding pattern. Immunohistochemistry on cases of nodular KS revealed that orf73/LNA is expressed in the nucleus of KS spindle cells. These findings demonstrate that orf73 encodes the 222- to 234-kDa LNA, is a component of **LNA**, and is expressed in KS tumor cells.
CT Check Tags: Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.
Animals
Antigens, Nuclear
Blotting, Western

d 13 8 9 all

L3 ANSWER 8 OF 24 MEDLINE on STN
AN 2000219626 MEDLINE
DN PubMed ID: 10753712
TI Expression and localization of human herpesvirus 8-encoded proteins in primary effusion lymphoma, Kaposi's sarcoma, and multicentric Castleman's disease.
AU Katano H; Sato Y; Kurata T; Mori S; Sata T
CS Department of Pathology, National Institute of Infectious Diseases, University of Tokyo, Japan.
SO Virology, (2000 Apr 10) 269 (2) 335-44.
Journal code: 0110674. ISSN: 0042-6822.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; AIDS
EM 200005
ED Entered STN: 20000518
Last Updated on STN: 20020813
Entered Medline: 20000505
AB To investigate the expression of human herpesvirus 8 (HHV8)-encoded proteins in the cells of primary effusion lymphoma (PEL), Kaposi's sarcoma (KS) and multicentric Castleman's disease (MCD), nine rabbit polyclonal antibodies to K2, ORF26, K8, K8.1, K10, K11, ORF59, ORF65, and ORF73 were developed. Western blot analysis in PEL cell lines (TY-1 and BCBL-1) revealed that the expression of these proteins, except ORF73 (**LANA**), was induced by tetradecanoylphorbol acetate (TPA) treatment, indicating that these proteins are lytic proteins. Immunofluorescence assay in primary PEL cells derived from pericardial effusion and PEL cell lines with and without TPA treatment revealed that primary PEL cells exhibited the same expression pattern as noninduced PEL cell lines, and the treatment changed localization of K8, ORF59, and ORF65 proteins. Immunohistochemistry revealed that 90% of KS spindle cells expressed the ORF73 protein, whereas a small population of KS cells expressed K8, K10, K11, ORF59, and ORF65 proteins. In MCD, ORF73, ORF59, K8, K2, and K10 proteins were expressed in the cells at mantle zone of the follicle. These data indicate that KS and PEL cells expressed predominantly latent proteins, whereas MCD expressed both latent and lytic proteins, suggesting that HHV8 plays a different role in the pathogenesis of HHV8-associated diseases.
Copyright 2000 Academic Press.
CT Check Tags: Human; Support, Non-U.S. Gov't
Animals
*Antibodies, Viral: IM, immunology
Antigens, Viral: IM, immunology
Blotting, Western
Carrier Proteins: IM, immunology
Fluorescent Antibody Technique
Giant Lymph Node Hyperplasia: IM, immunology
*Giant Lymph Node Hyperplasia: PA, pathology
Glycoproteins: IM, immunology
*Herpesvirus 8, Human: IM, immunology
Lymphoma: IM, immunology
*Lymphoma: PA, pathology
Nuclear Proteins: IM, immunology
Rabbits
Sarcoma, Kaposi: IM, immunology
*Sarcoma, Kaposi: PA, pathology
Tumor Cells, Cultured
Viral Proteins: IM, immunology
CN 0 (Antibodies, Viral); 0 (Antigens, Viral); 0 (Carrier)

Proteins); 0 (Glycoproteins); 0 (K8 protein, Human herpesvirus 8); 0 (K8.1 protein, Human herpesvirus 8); 0 (Nuclear Proteins); 0 (ORF59 protein, Human herpesvirus 8); 0 (ORF65 protein, human herpesvirus 8); 0 (Viral Proteins); 0 (latency-associated nuclear antigen)

L3 ANSWER 9 OF 24 MEDLINE on STN
AN 2000204464 MEDLINE
DN PubMed ID: 10738143
TI Detection of human herpesvirus 8 DNA and **antibodies** to latent nuclear and lytic-phase antigens in serial samples from aids patients with **Kaposi's sarcoma**.
AU Camera Pierrotti L; Masami Sumita L; Santos Freire W; Hehl Caiaffa Filho H; Akico Ueda Fick de Souza V
CS Departamento de Doencas Infectuosas and Casa da AIDS, Fundacao Zerbini, Faculdade de Medicina da Universidade de Sao Paulo, Sao Paulo, Brazil.
SO Journal of clinical virology : official publication of the Pan American Society for Clinical Virology, (2000 May) 16 (3) 247-51.
Journal code: 9815671. ISSN: 1386-6532.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; AIDS
EM 200005
ED Entered STN: 20000525
Last Updated on STN: 20000525
Entered Medline: 20000518
AB BACKGROUND: human herpesvirus 8 (HHV-8) have recently implicated in the etiology of **Kaposi's sarcoma** (KS), but the pathophysiologic and immunologic interactions between HHV-8 and the human host are incompletely understood. OBJECTIVE: this paper intends to present partial results of a follow-up study of KS patients, designed to investigate HHV-8 viremia and **antibody** response. METHODS: ninety-six paired serial samples (PBMCs and sera) were obtained from 12 aids patients with KS who received HAART prior or just after entry in the study. HHV-8 DNA was detected by nested-PCR and **antibodies** to HHV-8 latent nuclear antigen (**LANA**) and lytic antigen by immunofluorescence assay (IFA). RESULTS: HHV-8 DNA was detected in 33.3% of the first PBMC samples. Among the eight PCR negative patients, four presented positive samples during the follow-up and four remained negative. Five patients had intermittent viremia. Fifteen of the 96 PBMC samples were PCR positive (15.6%). Four of 39 samples (10.2%) from patients classified as stadio II and 11 of the 53 samples (20.7%) from patients in stadio IV were PCR positive (P=0.2). Six patients (50%) had anti-**LANA antibodies** at the entry in the study. Among the six seronegative patients, two seroconverted 2 months later and four patients remained seronegative during the 5-8 months of follow-up. All patients had anti-lytic **antibodies** since the first sample. CONCLUSION: the presence of HHV-8 viremia could be related to the severity of KS and could be intermittent even under HAART. A longer follow-up is needed to confirm these results.
CT Check Tags: Human; Male
*AIDS-Related Opportunistic Infections: VI, virology
Adult

d 16 1-4 all

L6 ANSWER 1 OF 4 MEDLINE on STN
AN 2000413752 MEDLINE
DN PubMed ID: 10882613
TI Evaluation of the latency-associated nuclear antigen (ORF73) of Kaposi's sarcoma-associated herpesvirus by peptide mapping and bacterially expressed recombinant western blot assay.
AU Olsen S J; Sarid R; Chang Y; Moore P S
CS Division of Bacterial and Mycotic Diseases, Centers for Disease Control and Prevention, Atlanta, GA 30333, USA.. sco2@cdc.gov
SO Journal of infectious diseases, (2000 Jul) 182 (1) 306-10.
Journal code: 0413675. ISSN: 0022-1899.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals; AIDS
EM 200008
ED Entered STN: 20000907
Last Updated on STN: 20030105
Entered Medline: 20000828
AB Kaposi's sarcoma (KS)-associated herpesvirus open-reading frame (ORF) 73 encodes a latency-associated nuclear antigen (**LANA**) that is the basis for several serologic assays. Immunoreactive epitopes were searched for by peptide mapping, and 171 cleavable, biotinylated 17-mer peptides offset by 5 residues were synthesized and screened with human serum samples by ELISA. The initial screen, which used highly reactive serum diluted 1:500, identified 38 immunoreactive peptides. These were subsequently tested on additional serum samples diluted 1:40. Thirteen peptides were more reactive with serum samples from patients with KS than with control serum samples. No single epitope was recognized by most KS patient serum samples. Combined use of these peptides did not increase test sensitivity to that of current indirect immunofluorescence assays for **LANA** (80%-90%). For comparison, full-length ORF73 was expressed in bacteria and analyzed by Western blot. The overall sensitivity was 67% (range, 100% among US patients with classic KS to 52% among Italian patients with classic KS). These studies suggest that **LANA** immunoreactivity may be due to variations in patient response or conformational epitopes.
CT Check Tags: Human; In Vitro
Blotting, Western
Epitope Mapping
Evaluation Studies
Herpesviridae Infections: DI, diagnosis
Herpesvirus 8, Human: GE, genetics
Herpesvirus 8, Human: IM, immunology
*Herpesvirus 8, Human: IP, isolation & purification
*Nuclear Proteins: AN, analysis
Nuclear Proteins: BL, blood
Nuclear Proteins: GE, genetics
Nuclear Proteins: IM, immunology
Peptide Mapping
Recombinant Proteins: AN, analysis
Sarcoma, Kaposi: BL, blood
*Sarcoma, Kaposi: DI, diagnosis
Sarcoma, Kaposi: IM, immunology
Sarcoma, Kaposi: VI, virology
CN 0 (Nuclear Proteins); 0 (Recombinant Proteins); 0 (latency-associated nuclear antigen)
L6 ANSWER 2 OF 4 MEDLINE on STN
AN 2000169047 MEDLINE

DN PubMed ID: 10702388
TI Differential viral protein expression in **Kaposi's**
sarcoma-associated herpesvirus-infected diseases: **Kaposi's**
sarcoma, primary effusion lymphoma, and multicentric Castleman's disease.
AU Parravicini C; Chandran B; Corbellino M; Berti E; Paulli M; Moore P S;
Chang Y
CS Department of Pathology, College of Physicians and Surgeons, Columbia
University, New York, New York 10032, USA.
NC CA67391 (NCI)
CA75911 (NCI)
CA82056 (NCI)
SO American journal of pathology, (2000 Mar) 156 (3) 743-9.
Journal code: 0370502. ISSN: 0002-9440.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals; AIDS
EM 200003
ED Entered STN: 20000330
Last Updated on STN: 20000330
Entered Medline: 20000323
AB **Kaposi's sarcoma (KS)-associated herpesvirus (KSHV)** is linked to KS, primary effusion lymphomas (PEL), and a subset of multicentric Castleman's disease (MCD). Transcript mapping studies using PEL cell lines have allowed preliminary classification of viral gene expression into constitutive (class I) and inducible (class II/III) categories. To determine whether viral gene expression differs *in vivo*, we examined tissue sections of KSHV-infected disorders, using specific antibodies against proteins that are representative of the different expression classes of KSHV genes. ORF73/**LANA** appears to be a surrogate marker for KSHV infection because it is constitutively expressed *in vitro* and *in vivo* in all KSHV-infected cells. Expression of vIRF1, vIL6, and PF-8 proteins in the infected B cells of MCD lymph nodes reproduces the expression pattern observed in TPA-stimulated KSHV-infected B-cell lines. In contrast, the protein expression of the inducible viral genes that we tested in KS and PEL biopsies is restricted to PF-8 and vIL6, respectively. The tightly restricted expression of KSHV proteins *in vivo* differs from the dysregulated expression of inducible KSHV genes *in vitro* and suggests that viral gene expression in KSHV-infected cell lines does not accurately reflect what occurs in diseased tissues. These differences may be related to either cell-specific or immune restriction of viral replication.
CT Check Tags: Human; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.
Fluorescent Antibody Technique, Indirect
Gene Expression
Genes, Viral
Giant Lymph Node Hyperplasia: ME, metabolism
Giant Lymph Node Hyperplasia: PA, pathology
*Giant Lymph Node Hyperplasia: VI, virology
*Herpesvirus 8, Human: GE, genetics
Herpesvirus 8, Human: IP, isolation & purification
Lymph Nodes: PA, pathology
Lymph Nodes: VI, virology
Lymphoma, B-Cell: ME, metabolism
Lymphoma, B-Cell: PA, pathology
*Lymphoma, B-Cell: VI, virology
 Sarcoma, Kaposi: ME, metabolism
 Sarcoma, Kaposi: PA, pathology
 *b**Sarcoma, Kaposi: VI, virology**
Skin Neoplasms: ME, metabolism
Skin Neoplasms: PA, pathology
*Skin Neoplasms: VI, virology

Tumor Cells, Cultured
*Viral Proteins: ME, metabolism
CN 0 (Viral Proteins)

L6 ANSWER 3 OF 4 MEDLINE on STN
AN 1999194248 MEDLINE
DN PubMed ID: 10096584
TI **Kaposi's sarcoma-associated herpesvirus: a sexually transmissible infection?**
AU Grulich A E; Olsen S J; Luo K; Hendry O; Cunningham P; Cooper D A; Gao S J; Chang Y; Moore P S; Kaldor J M
CS National Centre in HIV Epidemiology and Clinical Research, Sydney, Australia.
SO Journal of acquired immune deficiency syndromes and human retrovirology : official publication of the International Retrovirology Association, (1999 Apr 1) 20 (4) 387-93.
Journal code: 9501482. ISSN: 1077-9450.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; AIDS
EM 199904
ED Entered STN: 19990504
Last Updated on STN: 19990504
Entered Medline: 19990420
AB We examined sexual behavior as a risk factor for **Kaposi's** sarcoma-associated herpesvirus (KSHV) infection and examined the relation between KSHV seropositivity and development of KS in cross-sectional and cohort studies of 130 homosexual men diagnosed with AIDS in Sydney, Australia during the period from 1991 to 1993. KSHV serology was measured using antibody tests to latency-associated nuclear antigen (**LANA**) and lytically expressed open reading frame (ORF) 65.2. In the cross-sectional analysis, 52% (68) of study subjects were KSHV-seropositive by either assay. KSHV-seropositive men were significantly more likely to be seropositive to both herpes simplex type 2 (odds ratio [OR] 3.0; 95% confidence interval [CI], 1.2-7.5 for **LANA** and OR 2.8; 95% CI, 1.3-6.0 for ORF 65) and hepatitis A virus (OR 2.2; 95% CI, 1.1-4.5 for ORF 65). KSHV-seropositive men reported nonsignificantly more casual sexual partners and were nonsignificantly more likely to report insertive oroanal contact with casual partners. These data suggest that KSHV might be sexually transmitted among homosexual men. Men were observed until October 1996 for development of KS. Those seropositive to either KSHV assay at baseline were more likely than the seronegative to develop KS during follow-up (rate ratio [RR] 4.4; 95% CI, 1.9-10.2). Of those seropositive for KSHV, 53% developed KS.
CT Check Tags: Human; Male; Support, Non-U.S. Gov't
AIDS-Related Opportunistic Infections: BL, blood
AIDS-Related Opportunistic Infections: IM, immunology
AIDS-Related Opportunistic Infections: PP, physiopathology
*AIDS-Related Opportunistic Infections: TM, transmission
Cross-Sectional Studies
*Herpesvirus 8, Human
Prospective Studies
Risk Factors
 Sarcoma, Kaposi: BL, blood
 Sarcoma, Kaposi: IM, immunology
 Sarcoma, Kaposi: PP, physiopathology
 *Sarcoma, Kaposi: VI, virology
 Sexually Transmitted Diseases, Viral: CO, complications
*Sexually Transmitted Diseases, Viral: TM, transmission
 Sexually Transmitted Diseases, Viral: VI, virology

L6 ANSWER 4 OF 4 MEDLINE on STN
AN 1999099035 MEDLINE
DN PubMed ID: 9882349
TI Characterization and cell cycle regulation of the major **Kaposi's**
sarcoma-associated herpesvirus (human herpesvirus 8) latent genes and
their promoter..
AU Sarid R; Wiezorek J S; Moore P S; **Chang Y**
CS Department of Pathology, College of Physicians and Surgeons, Columbia
University, New York, New York, 10032, USA.
NC CA67391 (NCI)
CA73564 (NCI)
SO Journal of virology, (1999 Feb) 73 (2) 1438-46.
Journal code: 0113724. ISSN: 0022-538X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; AIDS
EM 199902
ED Entered STN: 19990301
Last Updated on STN: 19990301
Entered Medline: 19990218
AB Retinoblastoma tumor suppressor protein (pRB) inhibition by tumor virus
oncoproteins has been attributed to the need for these viruses to promote
lytic viral nucleic acid synthesis by unscheduled entry into the S phase
of the cell cycle. **Kaposi's** sarcoma-associated herpesvirus
(KSHV or HHV8) encodes a functional cyclin (vCYC) which is expressed
during latency and can direct phosphorylation of pRB. We mapped the two
major latent transcripts encoding vCYC, latent transcript 1 (LT1) and LT2,
by cDNA sequencing, 5' rapid amplification of cDNA ends, and primer
extension analyses. Both LT1 and LT2 transcripts are spliced, originate
from the same start site, and encode ORF K13 (vFLIP) as well as ORF72
(vCYC). The latency-associated nuclear antigen (**LANA**, ORF73) is
encoded by LT1 but spliced from LT2. While differential expression of the
two transcripts was not found, the promoter controlling LT1/LT2
transcription is regulated in a cell cycle-dependent manner. Activities
of both KSHV LT1/LT2 and huCYC D1 luciferase promoter reporters
transfected into NIH 3T3 cells increase 11- and 4-fold, respectively,
after release from cell cycle arrest by serum starvation. Further, vCYC
and huCYC D2 mRNA levels are low in naturally infected BCBL-1 cells
arrested in late G1 with L-mimosine but increase in parallel during a 24-h
period after release from cell cycle arrest. Cell cycle regulation of
KSHV vCYC expression mimics cellular D cyclin regulation and may maintain
infected cell cycling. This is consistent with an alternative hypothesis
that tumor viruses have developed specific responses to innate cellular
defenses against latent virus infection that include pRB-induced cell
cycle arrest.
CT Check Tags: Human; Support, U.S. Gov't, P.H.S.
3T3 Cells
Animals
Base Sequence

L10 ANSWER 6 OF 10 MEDLINE on STN
AN 2001485550 MEDLINE
DN PubMed ID: 11527803
TI Comparison of serologic assays for detection of **antibodies**
against human herpesvirus 8.
AU Corchero J L; Mar E C; Spira T J; Pellett P E; Inoue N
CS Division of Viral and Rickettsial Diseases, Centers for Disease Control
and Prevention, 1600 Clifton Road, Atlanta, GA 30333, USA.
SO Clinical and diagnostic laboratory immunology, (2001 Sep) 8 (5) 913-21.
Journal code: 9421292. ISSN: 1071-412X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200112
ED Entered STN: 20010903
Last Updated on STN: 20020122
Entered Medline: 20011204
AB Improvement of serologic assays for detection of **antibodies**
against human herpesvirus 8 (**HHV-8**) is critical to
better understand its epidemiology and biology. We produced the
HHV-8 latent (**ORF73**) and lytic (**ORF65**, K8.1,
and glycoprotein B) antigens in the Semliki Forest virus system and
evaluated their performance in immunofluorescence assays (IFAs) and
enzyme-linked immunosorbent assays (ELISAs). These assays were compared
with other latent antigen-based assays, including an IFA based on primary
effusion lymphoma (PEL) cells and an ELISA based on bacterially expressed
ORF73 antigen, as well as with other lytic antigen-based assays,
including an IFA based on induced PEL cells, a commercial ELISA based on
purified virions, and ELISAs based on K8.1- and **ORF65**-derived
oligopeptides. We used a panel of 180 serum specimens obtained from three
groups expected to have high, intermediate, and low **HHV-8**
prevalences. Using three different evaluation methods, we found
that (i) the performances of the lytic antigen-based ELISAs were almost
equivalent, (ii) the lytic antigen-based assays were more sensitive than
the latent antigen-based assays, and (iii) in general, IFAs were more
sensitive than ELISAs based on the same open reading frame. We also found
that serum specimens from healthy individuals contained **antibodies**
cross-reactive with **HHV-8** glycoprotein B that can
potentially cause false-positive reactions in lytic PEL-based IFAs.
Although this is not a substantial problem in most epidemiologic studies,
it may confound the interpretation of data in studies that require high
assay specificity. Because the K8.1-based IFA provides sensitivity
similar to that of lytic PEL-based IFAs and improved specificity, it can
be a useful alternative to the PEL-based IFAs.
CT Check Tags: Comparative Study; Human; Support, Non-U.S. Gov't; Support,
U.S. Gov't, P.H.S.
 ***Antibodies, Viral: BI, biosynthesis**
 Antibodies, Viral: ME, metabolism
 Antigens, Viral: BI, biosynthesis
 Cell Line
 Enzyme-Linked Immunosorbent Assay: MT, methods
 Fluorescent Antibody Technique: MT, methods
 Glycoproteins: AN, analysis
***Herpesviridae Infections: BL, blood**
***Herpesviridae Infections: DI, diagnosis**
***Herpesvirus 8, Human: IM, immunology**
***Herpesvirus 8, Human: IP, isolation & purification**
 Nuclear Proteins: BI, biosynthesis
 Semliki forest virus: IM, immunology
 Viral Envelope Proteins: IM, immunology

*Viral Proteins

CN 0 (**Antibodies, Viral**); 0 (Antigens, Viral); 0 (Glycoproteins); 0 (K8.1 protein, Human herpesvirus 8); 0 (Nuclear Proteins); 0 (Viral Envelope Proteins); 0 (Viral Proteins); 0 (glycoprotein B, human herpesvirus 8); 0 (latency-associated nuclear antigen)

L10 ANSWER 7 OF 10 MEDLINE on STN
AN 2000261951 MEDLINE
DN PubMed ID: 10799457
TI New immunofluorescence assays for detection of Human herpesvirus 8-specific **antibodies**.
AU Inoue N; Mar E C; Dollard S C; Pau C P; Zheng Q; Pellett P E
CS Division of Viral and Rickettsial Diseases, STD, and TB Laboratory Research, National Center for Infectious Diseases, Centers for Disease Control and Prevention, Atlanta, Georgia 30333, USA.. nai0@cdc.gov
SO Clinical and diagnostic laboratory immunology, (2000 May) 7 (3) 427-35.
Journal code: 9421292. ISSN: 1071-412X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; AIDS
EM 200006
ED Entered STN: 20000706
Last Updated on STN: 20000706
Entered Medline: 20000627
AB Several assays have been developed for detection of immunoglobulin G **antibodies** to Human herpesvirus 8 (**HHV-8**), including immunofluorescence assays (IFAs) and enzyme-linked immunosorbent assays (ELISAs). However, the specificity and sensitivity of these assays are not completely defined due to the lack of a "gold standard." Although IFAs based on primary effusion lymphoma (PEL) cell lines are used widely, the assays can be confounded by nonspecific reactions against cellular components and potential cross-reaction with **antibodies** against other herpesviruses. To provide more reliable IFAs, we established recombinant Semliki Forest viruses (rSFVs) expressing the **HHV-8**-specific proteins **ORF73** and K8.1 and used BHK-21 cells infected with these rSFVs for IFA (**ORF73**-IFA and K8.1-IFA). Expression of the **HHV-8**-specific proteins at very high levels by the rSFV system allowed easy scoring for IFA and thereby increased specificity. The rSFV system also allowed detection of **antibodies** against glycosylation-dependent epitopes of K8.1. Titters measured by rSFV-based IFAs and PEL-based IFAs correlated well (correlation coefficients of >0.9), and concordances of seroreactivities between rSFV-based and PEL-based IFAs were >97% (kappa > 0.93). K8.1-IFA was more sensitive than either **ORF73**-IFA or peptide ELISAs. Using PEL-based lytic IFA as a reference assay, the sensitivity and specificity of K8.1-IFA were estimated to be 94 and 100%, respectively. **HHV-8** prevalences determined by K8.1-IFA among the human immunodeficiency virus (HIV)-positive (HIV(+)) Kaposi's sarcoma (KS) patients, HIV(+) KS(-) patients, and healthy controls were 100, 65, and 6.7%, respectively, which were consistent with prior reports. Therefore, our rSFV-based IFAs may provide a specific and sensitive method for use in epidemiology studies. In addition, they will provide a basis for further development of diagnostic tests for **HHV-8** infection.

CT Check Tags: Comparative Study; Human
Animals
Antibodies, Viral: AN, analysis
Cell Line
Cross Reactions
Enzyme-Linked Immunosorbent Assay: MT, methods
Enzyme-Linked Immunosorbent Assay: ST, standards
Epitopes: IM, immunology

Epitopes: ME, metabolism
Fluorescent Antibody Technique
Gene Expression Regulation, Viral
*Glycoproteins: AN, analysis
Glycoproteins: GE, genetics
Glycoproteins: IM, immunology
Glycosylation
Hamsters
*Herpesviridae Infections: DI, diagnosis
Herpesviridae Infections: EP, epidemiology
Herpesviridae Infections: IM, immunology
Herpesvirus 8, Human: GE, genetics
Herpesvirus 8, Human: IM, immunology
*Herpesvirus 8, Human: IP, isolation & purification
Kidney: CY, cytology
Molecular Biology: MT, methods
Molecular Biology: ST, standards
*Nuclear Proteins: AN, analysis
Nuclear Proteins: GE, genetics
Nuclear Proteins: IM, immunology
*Phosphoproteins
Rabbits
Semliki forest virus
Sensitivity and Specificity
Seroepidemiologic Studies
*Viral Proteins
CN 0 (**Antibodies, Viral**); 0 (Epitopes); 0 (Glycoproteins); 0 (K8.1 protein, Human herpesvirus 8); 0 (Nuclear Proteins); 0 (Phosphoproteins); 0 (Viral Proteins); 0 (latent nuclear antigen (LNA))
L10 ANSWER 8 OF 10 MEDLINE on STN
AN 1999324295 MEDLINE
DN PubMed ID: 10393835
TI High expression of **HHV-8**-encoded **ORF73** protein in spindle-shaped cells of Kaposi's sarcoma.
AU Katano H; Sato Y; Kurata T; Mori S; Sata T
CS Department of Pathology, National Institute of Infectious Diseases, University of Tokyo, Tokyo, Japan.
SO American journal of pathology, (1999 Jul) 155 (1) 47-52.
Journal code: 0370502. ISSN: 0002-9440.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals; AIDS
EM 199907
ED Entered STN: 19990806
Last Updated on STN: 19990806
Entered Medline: 19990726
AB Human herpesvirus 8 (**HHV-8**) has been demonstrated previously in Kaposi's sarcoma (KS) tissues by immunohistochemistry, *in situ* polymerase chain reaction, and *in situ* hybridization. The **HHV-8**-encoded protein **ORF73** is a 222- or 234-kd protein named latent nuclear antigen (LNA) or latency-associated nuclear antigen (LANA) that is identified in **HHV-8**-infected cell lines by immunofluorescence assay. In the present study, a rabbit **antibody** against a recombinant **ORF73** protein was developed. Immunofluorescent staining of a **HHV-8**-infected cell line, TY-1, showed that the staining pattern of the anti-**ORF73 antibody** overlapped completely the LANA staining pattern obtained using KS patients' sera. Immunoblotting analysis showed that the anti-**ORF73 antibody** reacted specifically with 222- and 234-kd proteins that were present in TY-1 and BCBL-1 cell

lysates. Immunohistochemistry using a catalyzed signal amplification system demonstrated that the anti-**ORF73 antibody** reacted exclusively with the majority of KS spindle-shaped cells, showing a nuclear dot-like staining pattern. Some of the **ORF73** protein-positive cells also expressed CD34 and vimentin but not CD68 or factor-VIII-related antigen. These data indicate that the anti-**ORF73 antibody** recognizes LANA and that most KS cells are infected with **HHV-8** in the latent phase. Our findings also suggest that **ORF73** protein plays an important role in the pathogenesis of KS.

CT Check Tags: Human; Support, Non-U.S. Gov't
Animals
Blotting, Western
Cell Line: ME, metabolism
Cell Line: VI, virology
Fluorescent Antibody Technique
Herpesviridae Infections: ME, metabolism
Herpesvirus 8, Human
Immunohistochemistry
*Nuclear Proteins: ME, metabolism
*Phosphoproteins
Rabbits
*Sarcoma, Kaposi: ME, metabolism
Sarcoma, Kaposi: PA, pathology
CN 0 (Nuclear Proteins); 0 (Phosphoproteins); 0 (latent nuclear antigen (LNA))

L10 ANSWER 9 OF 10 MEDLINE on STN
AN 1999208833 MEDLINE
DN PubMed ID: 10191203
TI Comparison of human sera reactivities in immunoblots with recombinant human herpesvirus (**HHV**)-8 proteins associated with the latent (**ORF73**) and lytic (ORFs 65, K8.1A, and K8.1B) replicative cycles and in immunofluorescence assays with **HHV-8**-infected BCBL-1 cells.
AU Zhu L; Wang R; Sweat A; Goldstein E; Horvat R; Chandran B
CS Division of Infectious Diseases, The University of Kansas Medical Center, Kansas City, Kansas, 66160, USA.
NC CA75911 (NCI)
CA82056 (NCI)
R18906
SO Virology, (1999 Apr 10) 256 (2) 381-92.
Journal code: 0110674. ISSN: 0042-6822.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; AIDS
EM 199906
ED Entered STN: 19990614
Last Updated on STN: 19990614
Entered Medline: 19990601
AB The development of reliable, sensitive, and specific serological methods for the detection of human herpesvirus-8 (**HHV-8**) antibodies is critical for a thorough understanding of **HHV-8** prevalence and pathogenesis. To evaluate the potential usefulness of **HHV-8** proteins in measuring the responses against both latent and lytic antigens, we selected 1 latent [open reading frame (ORF) 73] antigen and 3 **HHV-8** lytic antigens (ORFs 65, K8.1A, and K8.1B) previously identified as immunogenic [Virology (1998) 243, 208-217]. Full-length genomic ORF 73 and full-length ORFs 65, K8.1A, and K8.1B from the cDNA clones were cloned, expressed in bacterial and baculovirus-insect cell expression

systems, and purified as GST fusion proteins. These recombinant proteins were used in Western blot reactions to test sera from 104 human immunodeficiency virus (HIV)+/Kaposi's sarcoma (KS)+ homosexual men, 77 HIV+/KS- homosexual men, and 84 age-matched HIV-/KS- men. These sera were also tested in immunofluorescence assays (IFAs) with uninduced and 12-O-tetradecanoylphorbol-13-acetate-induced B cell lymphoma-1 cells to detect **antibodies** against latency-associated nuclear antigens (LANA) and **antibodies** against lytic antigens (cytoplasmic fluorescence). These sera exhibited differential reactivities reflecting different titers of **antibodies** against **HHV-8** proteins, and variable reactivities were seen more commonly with the sera from HIV-/KS- adult men. In the Western blot assay, 89% (93 of 104) of HIV+/KS+ sera, 60% (46 of 77) of HIV+/KS- sera, and 7% (6 of 84) HIV+/KS- sera were reactive with both latent and lytic recombinant antigens. Western blot reactions with ORF 73 protein were more sensitive than LANA-IFA results. The lytic IFA and lytic Western blot (ORFs 65 and K8.1A) assays were more sensitive than the ORF 73 Western blots and LANA-IFA. With an exception of 2 sera from the HIV-/KS- group, all sera positive for lytic IFA **antibodies** and ORF 65 and K8.1A **antibodies** were also positive for latent **antibodies**. With few exceptions, sera positive for ORF 65 **antibodies** were also positive for K8.1A **antibodies**, and sera recognized the K8.1A protein more often than the K8.1B protein. There is a high degree of concordance between IFA and Western blot reactions, suggesting that this panel of **HHV-8** recombinant proteins could detect a majority of the **HHV-8**-seropositive individuals. These results suggest that IFA followed by confirmation with the Western blot reactions with a panel of latent and lytic immunogenic antigens would provide a reliable, sensitive, and specific method for the detection of **HHV-8 antibodies**.

Copyright 1999 Academic Press.

CT Check Tags: Comparative Study; Human; Male; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.

Adolescent

Adult

Antibodies, Viral: BL, blood

***Antibodies, Viral:** IM, immunology

Antigens, Viral: GE, genetics

***Antigens, Viral:** IM, immunology

Blotting, Western

Cell Line

Fluorescent Antibody Technique, Indirect

Gene Expression

Glutathione Transferase: GE, genetics

Glutathione Transferase: IM, immunology

Glycoproteins: GE, genetics

***Glycoproteins:** IM, immunology

HIV Infections: IM, immunology

Herpesvirus 8, Human: GE, genetics

***Herpesvirus 8, Human:** IM, immunology

Immunoblotting

Middle Aged

Nuclear Proteins: GE, genetics

***Nuclear Proteins:** IM, immunology

Open Reading Frames

***Phosphoproteins**

Recombinant Fusion Proteins: GE, genetics

Recombinant Fusion Proteins: IM, immunology

Recombination, Genetic

Sarcoma, Kaposi: BL, blood

***Sarcoma, Kaposi:** IM, immunology

Sarcoma, Kaposi: VI, virology

Viral Proteins: GE, genetics
*Viral Proteins: IM, immunology
Virus Latency
Virus Replication

CN 0 (**Antibodies**, Viral); 0 (Antigens, Viral); 0 (Glycoproteins); 0 (K8.1 protein, Human herpesvirus 8); 0 (Nuclear Proteins); 0 (ORF65 protein, human herpesvirus 8); 0 (Phosphoproteins); 0 (Recombinant Fusion Proteins); 0 (Viral Proteins); 0 (latent nuclear antigen (LNA)); EC 2.5.1.18 (Glutathione Transferase)

L10 ANSWER 10 OF 10 MEDLINE on STN
AN 1999090765 MEDLINE
DN PubMed ID: 9875587
TI Seroconversion for human herpesvirus 8 during HIV infection is highly predictive of Kaposi's sarcoma.
AU Renwick N; Halaby T; Weverling G J; Dukers N H; Simpson G R; Coutinho R A; Lange J M; Schulz T F; Goudsmit J
CS Department of Human Retrovirology, Academic Medical Centre, University of Amsterdam, The Netherlands.
SO AIDS (London, England), (1998 Dec 24) 12 (18) 2481-8.
Journal code: 8710219. ISSN: 0269-9370.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; AIDS
EM 199907
ED Entered STN: 19990727
Last Updated on STN: 19990727
Entered Medline: 19990714
AB BACKGROUND: The finding of **antibodies** against human herpesvirus 8 (**HHV-8**) is associated with the occurrence of Kaposi's sarcoma in persons infected with HIV. However, the predictive value of **HHV-8 antibodies** for Kaposi's sarcoma in HIV infection is unknown. METHODS: The Amsterdam Cohort Studies on HIV infection and AIDS started in 1984 for homosexual men and in 1985 for injecting drug users. Serum samples from 1459 homosexual men and 1167 drug users were tested for **antibodies** to recombinant **HHV-8** lytic-phase capsid (ORF65) antigen and latent-phase nuclear (ORF73) antigen. Individuals were retrospectively identified as **HHV-8**-positive or **HHV-8**-negative at enrolment or **HHV-8** seroconverter during the study. Kaposi's sarcoma-free survival time was compared between HIV-infected men who were positive for **HHV-8** at enrolment and those who later seroconverted for **HHV-8**. Hazard ratios were estimated for Kaposi's sarcoma, lymphoma, and opportunistic infection according to the **HHV-8** serostatus. RESULTS: The incidence of **HHV-8** seroconversion among drugs users was 0.7 per 100 person-years based on 31 seroconversions, whereas an incidence of 3.6 was found among homosexual men based on 215 seroconversions. The hazard ratio for Kaposi's sarcoma was 3.15 (95% CI: 1.89-5.25) in HIV-infected individuals if **HHV-8 antibodies** were present either at enrolment or at HIV seroconversion. In HIV-infected persons who later seroconverted to **HHV-8**, Kaposi's sarcoma developed more rapidly: hazard ratio of 5.04 (95% CI: 2.94-8.64), an additional risk of 1.60 (95% CI: 1.01-2.53; P = 0.04). Time-dependent adjustment for CD4+ cell count and HIV RNA had no impact on the additional risk, although the CD4+ cell count was an independent risk factor for Kaposi's sarcoma. **HHV-8** infection did not increase the risk of AIDS-related lymphoma or opportunistic infections. CONCLUSIONS: The incidence of **HHV-8** infection is higher in homosexual men than in drug users. The presence of **HHV-8 antibodies** in HIV-infected

persons increases the risk of Kaposi's sarcoma. Among HIV-infected persons, those who subsequently seroconvert for **HHV-8** are at highest risk. These results strongly confirm the causal role of **HHV-8** in Kaposi's sarcoma and emphasize the clinical relevance of **HHV-8** seroconversion before and after the HIV infection.

CT Check Tags: Female; Human; Male; Support, Non-U.S. Gov't
Adult

***Antibodies, Viral:** BL, blood
Antigens, Viral: IM, immunology
CD4 Lymphocyte Count
Capsid: IM, immunology
***HIV Infections:** CO, complications
HIV Infections: IM, immunology
***HIV Infections:** VI, virology
HIV-1: IP, isolation & purification
***Herpesvirus 8, Human:** IM, immunology
Homosexuality, Male
Immunoenzyme Techniques
Middle Aged
RNA, Viral: BL, blood
Retrospective Studies
Risk Factors
***Sarcoma, Kaposi:** ET, etiology
Sarcoma, Kaposi: VI, virology
Substance Abuse, Intravenous

=> d his

(FILE 'HOME' ENTERED AT 13:05:11 ON 08 JUN 2004)

FILE 'MEDLINE' ENTERED AT 13:05:22 ON 08 JUN 2004

L1 77 S LANA AND KAPOSI?
L2 662354 S ANTIBOD?
L3 24 S L1 AND L2
 E CHANG Y/AU
L4 310 S E3
L5 52 S KAPOSI? AND L4
L6 4 S L1 AND L5
L7 46 S ORF73
L8 16 S ANTIBO? AND L7
L9 971 S HHV-8
L10 10 S L8 AND L9

WEST Search History

DATE: Tuesday, June 08, 2004

Hide? Set Name Query Hit Count

DB=DWPI; PLUR=YES; OP=ADJ

L7 Sato.in. and HHV-8 0

L6 Sato.in. 17375

L5 Sato.in. and Kaposi 0

DB=USPT; PLUR=YES; OP=ADJ

L4 Sato.in. and Kaposi 3

L3 Sato.in. and virus 121

L2 Sato.in. and HHV-8 0

L1 Sato.in. 15866

END OF SEARCH HISTORY

WEST Search History

[Hide Items](#) [Restore](#) [Clear](#) [Cancel](#)

DATE: Tuesday, June 08, 2004

<u>Hide?</u>	<u>Set Name</u>	<u>Query</u>	<u>Hit Count</u>
		<i>DB=PGPB; PLUR=YES; OP=ADJ</i>	
<input type="checkbox"/>	L16	LANA and kapos? and antibodies	9
		<i>DB=EPAB; PLUR=YES; OP=ADJ</i>	
<input type="checkbox"/>	L15	LANA and kapos? and antibodies	0
		<i>DB=JPAB; PLUR=YES; OP=ADJ</i>	
<input type="checkbox"/>	L14	LANA and kapos? and antibodies	0
		<i>DB=DWPI; PLUR=YES; OP=ADJ</i>	
<input type="checkbox"/>	L13	LANA and kapos? and antibodies	1
		<i>DB=USPT; PLUR=YES; OP=ADJ</i>	
<input type="checkbox"/>	L12	ORF73 and HHV-8	3
<input type="checkbox"/>	L11	ORF73 and kapos? and antibodies.clm.	2
<input type="checkbox"/>	L10	ORF73 and kapos? and antibodies	14
<input type="checkbox"/>	L9	ORF73 and kapos? antibodies	0
<input type="checkbox"/>	L8	ORF73 and antibodies	19
<input type="checkbox"/>	L7	ORF37 and antibodies	8
<input type="checkbox"/>	L6	LANA2 and antibodies	1
<input type="checkbox"/>	L5	LANA-2 and antibodies	0
<input type="checkbox"/>	L4	LANA and kapos? and antibodies	9
<input type="checkbox"/>	L3	LANA and kapos?	9
<input type="checkbox"/>	L2	LANA and kaposis	9
<input type="checkbox"/>	L1	LANA	334

END OF SEARCH HISTORY

Hit List

[Clear](#)[Generate Collection](#)[Print](#)[Fwd Refs](#)[Bkwd Refs](#)[Generate OACS](#)

Search Results - Record(s) 1 through 9 of 9 returned.

1. Document ID: US 6669939 B1

L4: Entry 1 of 9

File: USPT

Dec 30, 2003

US-PAT-NO: 6669939

DOCUMENT-IDENTIFIER: US 6669939 B1

TITLE: (Poly)peptides which represent the epitopes of the human herpes virus type 8

DATE-ISSUED: December 30, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schatz; Octavian	Altomunster			DE
Haas; Jurgen	Munich			DE

US-CL-CURRENT: 424/185.1; 424/186.1, 424/192.1, 424/199.1, 424/229.1, 435/4, 435/5,
435/69.1, 435/7.1, 435/7.9, 435/975[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Abstract](#) [Detailed Abstract](#) [Claims](#) [KWMC](#) [Drawn D](#)

2. Document ID: US 6653465 B2

L4: Entry 2 of 9

File: USPT

Nov 25, 2003

US-PAT-NO: 6653465

DOCUMENT-IDENTIFIER: US 6653465 B2

TITLE: Spliced gene of KSHV / HHV8, its promoter and monoclonal antibodies specific for LANA2

DATE-ISSUED: November 25, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Chang; Yuan	Irvington	NY		
Moore; Patrick S.	Irvington	NY		

US-CL-CURRENT: 536/24.1; 424/199.1, 424/229.1, 435/325, 435/91.1[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Abstract](#) [Detailed Abstract](#) [Claims](#) [KWMC](#) [Drawn D](#)

3. Document ID: US 6642008 B1

L4: Entry 3 of 9

File: USPT

Nov 4, 2003

US-PAT-NO: 6642008
DOCUMENT-IDENTIFIER: US 6642008 B1

TITLE: Assays and therapies for latent viral infection

DATE-ISSUED: November 4, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Harley; John B.	Oklahoma City	OK		
James; Judith Ann	Edmond	OK		
Kaufman; Kenneth M.	Oklahoma City	OK		

US-CL-CURRENT: 435/7.1; 435/6, 435/7.94

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KWIC	Drawn D
------	-------	----------	-------	--------	----------------	------	-----------	----------	--------	------	---------

 4. Document ID: US 6541253 B2

L4: Entry 4 of 9

File: USPT

Apr 1, 2003

US-PAT-NO: 6541253
DOCUMENT-IDENTIFIER: US 6541253 B2

TITLE: Diagnostics and therapy of diseases associated with HHV-8 infections

DATE-ISSUED: April 1, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Haas; Juergen	Munich			DE
Kremmer; Elisabeth	Freising			DE
Kliche; Stefanie	Munich			DE

US-CL-CURRENT: 435/332; 435/339, 435/344, 435/5

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KWIC	Drawn D
------	-------	----------	-------	--------	----------------	------	-----------	----------	--------	------	---------

 5. Document ID: US 6503513 B2

L4: Entry 5 of 9

File: USPT

Jan 7, 2003

US-PAT-NO: 6503513
DOCUMENT-IDENTIFIER: US 6503513 B2

TITLE: Diagnostics and therapy of diseases associated with HHV-8 infections

DATE-ISSUED: January 7, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Haas; Juergen	Munich			DE
Kremmer; Elisabeth	Freising			DE
Kliche; Stefanie	Munich			DE

US-CL-CURRENT: 424/229.1; 424/204.1, 435/5, 435/6, 435/7.1, 530/300, 530/350,
536/23.72

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Detailed Abstract](#) | [Claims](#) | [KMC](#) | [Drawn D](#)

6. Document ID: US 6482587 B1

L4: Entry 6 of 9

File: USPT

Nov 19, 2002

US-PAT-NO: 6482587

DOCUMENT-IDENTIFIER: US 6482587 B1

TITLE: Methods to inhibit or enhance the binding of viral DNA to genomic host DNA

DATE-ISSUED: November 19, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Robertson; Erle S.	Plymouth	MI		
Cotter; Murray A.	Ann Arbor	MI		

US-CL-CURRENT: 435/5; 424/9.2, 435/325, 435/7.21, 530/350

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Abstract](#) | [Detailed Abstract](#) | [Claims](#) | [KMC](#) | [Drawn D](#)

7. Document ID: US 6323183 B1

L4: Entry 7 of 9

File: USPT

Nov 27, 2001

US-PAT-NO: 6323183

DOCUMENT-IDENTIFIER: US 6323183 B1

TITLE: Composition for and method of treatment using triterpenoids

DATE-ISSUED: November 27, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Flore; Ornella	New York	NY	10021	

US-CL-CURRENT: 514/26[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Advanced Search](#) | [Claims](#) | [KWMC](#) | [Drawn D](#) 8. Document ID: US 6322792 B1

L4: Entry 8 of 9

File: USPT

Nov 27, 2001

US-PAT-NO: 6322792

DOCUMENT-IDENTIFIER: US 6322792 B1

TITLE: Rhadino virus LANA acts in trans on a unit of rhadino virus DNA to mediate efficient episome persistance

DATE-ISSUED: November 27, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kieff; Elliott D.	Brookline	MA	02445	
Ballestas; Mary E.	Beverly	MA		
Kaye; Kenneth M.	Weston	MA		

US-CL-CURRENT: 424/199.1, 424/204.1, 424/229.1, 435/235.1, 435/320.1, 435/325,
435/5, 435/69.1, 435/69.3, 536/23.72[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Advanced Search](#) | [Claims](#) | [KWMC](#) | [Drawn D](#) 9. Document ID: US 6319667 B1

L4: Entry 9 of 9

File: USPT

Nov 20, 2001

US-PAT-NO: 6319667

DOCUMENT-IDENTIFIER: US 6319667 B1

TITLE: Diagnostics and therapy of diseases associated with HHV-8 infections

DATE-ISSUED: November 20, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Haas; Juergen	Munich			DE
Kremmer; Elisabeth	Freising			DE
Kliche; Stefanie	Munich			DE

US-CL-CURRENT: 435/5, 435/7.1, 435/7.94, 530/300, 530/326, 530/389.1, 530/389.4[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Search](#) | [Advanced Search](#) | [Claims](#) | [KWMC](#) | [Drawn D](#)[Clear](#) | [Generate Collection](#) | [Print](#) | [Fwd Refs](#) | [Bkwd Refs](#) | [Generate OACS](#)